DOCUMENT RESUME

ED 181 201 CE 023 600

TITLE The Uncomplicated Elementary Career Education System for the "Real" Classroom. Career Corners--Math for 7-8.

INSTITUTION Illinois State Office of Education, Springfield. Div. of Adult Vocational and Technical Education.

PUB DATE Feb 79

NOTE 114p.; For related documents see CE 023 596 and CE 023 598-599.

EDRS PRICE MF01/PC05 Plus Postage.

DESCRIPTORS Arithmetic; *Career Education; *Career Exploration; Class Activities; Decimal Fractions; Elementary Education; *Elementary School Mathematics; Fractions; *Fused Curriculum; Geometry; Grade 7; Grade 8; Instructional Materials; Integers; *Job Skills; Junior High Schools; Learning Activities; Measurement; Percentage; Worksheets

ABSTRACT

Prepared by classroom teachers for the infusion of career education into existing curriculum, this notebook contains career-related student worksheets in a number of math skills. The activities are suitable for use with a variety of ability levels and learning styles. These worksheets for grades 7 and 8 are divided into seven major mathematics areas: addition-subtraction, multiplication-division, decimals, fractions, percentages, integers, and geometry-measurement. Answers are located on the backs of the worksheets. Sample worksheet titles under addition-subtraction include "Count Your Calories," "$300 to Spend," and "The Three M's" (mean, median, and mode); under multiplication-division: "Counting Cups," "The High Cost of Living," and "Cash Count"; under decimals: "Miles per Gallon," "Making Change," "Time Cards," and "Order Forms"; under fractions: "Farm Land" and "Cookies"; under percentages: "Your Savings Earn More" and "Commission"; under integers: "Balance or Bust" and "Being a Surveyor"; and under geometry-measurement: "Estimating Roofs" and "Plan a City." On each worksheet are indicated the careers to which that particular activity is related. (YLB)

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ED181201

The Uncomplicated Elementary Career Education System for the "Real" Classroom

CAREER CORNERS--MATH FOR 7-8

STATE BOARD OF EDUCATION
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Joseph M. Cronin, Superintendent

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Department of Adult, Vocational and Technical Education

Springfield, Illinois

February, 1979

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CE 023 600

OVERVIEW OF THE SYSTEM

The Uncomplicated Elementary Career Education System for the "Real" Classroom

These materials were prepared by classroom teachers for the infusion of career education into your already existing curriculum. This system is designed to provide career education activities that could blend easily into any classroom teacher's course of study.

Career Card File Box
For K-3

This container has both individual student and teacher activities. Ideas are in a variety fo career-related areas, and cover diversified learning styles and abilities.

Career Capers
For 4-6

This notebook has student and teacher activities in the basic curriculum areas, which cover various ability levels and learning modes.

Career Corners-Language Arts
For 7-8

This notebook contains student worksheets in career-oriented areas, which can be utilized with varying learning styles and ability groups.

Career Corners-Math
For 7-8

This notebook contains student career-related worksheets in a number of math skill areas, which can be used with a variety of ability levels and learning styles.

Administrative Materials

Each month an administrator is to distribute the following materials to the classroom teacher.

K-3 Factivities

K-3 teachers receive a "Factivity" pamphlet emphasizing the career areas in the "Card File Box".

These pamphlets contain language arts and math ideas for the month's topic, as well as student work-sheets that can be duplicated.

4-6 Factivities

4-6 teachers receive a "Factivity" pamphlet emphasizing a career topic.

These pamphlets contain student worksheets in the curriculum areas of the "Career Capers" notebook.

In the C.A.S.E. Cooperative, a new set of "K-6 Factivities" is produced annually to provide ongoing career education activities. It is suggested that school districts adopting this system strongly consider such a policy also.

FOREWORD

The Illinois Office of Education is pleased to make available "The Uncomplicated Elementary Career Education System for the 'Real' Classroom." The materials and activities in this system are intended to be infused into the existing curriculum and are therefore supplementary in nature.

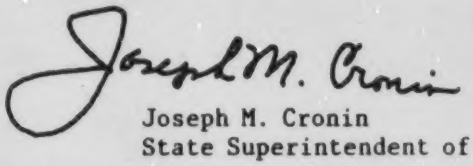
The K-6 sections originated from workshops sponsored by C.A.S.E. (Cooperative Association for Superior Education), consisting of the following high schools: Bloom Township High Schools - District 206 (the administrative district) and six elementary districts; #167 - Brookwood; #168 - Community Consolidated; #169 - East Chicago Heights; #170 - Chicago Heights; #172 - Sandridge; and #194 - Steger. Sincere appreciation is extended to the C.A.S.E. Superintendents for their support and cooperation in the development and implementation of this project.

The first phase of this activity was planning and development and the two 7-8 notebooks were developed. The second phase goal was implementation and revision.

The final phase of the project was field testing all of the developed system. Six field test sites representing various geographical locations and populations were utilized. They were: Roxana Community District #1 - Roxana, Illinois; Ben Funk School, Unit District #4 - Shirley, Illinois; Nathan Hale School, District #171 - Lansing, Illinois; DuPage Elementary Career Education Center - Wheaton, Illinois; Career Guidance Center, Lake County Area Vocational Center - Grayslake, Illinois; St. Joseph's School - Bradley, Illinois. Based on field test information the materials were revised and printed for dissemination.

Sincere appreciation is extended to the teachers, administrators, and supportive personnel who participated in the development, evaluation, and/or revision of the career education system.

Special recognition is given to the following individuals for their outstanding contributions: Mr. Dean Wertz, vocational director, Bloom High School, project director; Mrs. Barbara Battle Cleary and Ms. Barbara Dennis, project coordinators; Ms. Candyce Jones, media coordinator; Mrs. Patricia Hayden, secretary and Mrs. Martha Fahrenwald, illustrator.



Joseph M. Cronin
State Superintendent of Education

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CAREERS
Nutritionist
Food Technologist
Dietician

ADDITION
SUBTRACTION 1

COUNT YOUR CALORIES

DIRECTIONS: *As a hospital dietician, you must monitor the daily calorie intake of several patients. Compute the total daily calories for each person listed below.*

Patient #1	Calories	Patient #2	Calories	Patient #3	Calories
BREAKFAST		**BREAKFAST**		**BREAKFAST**	
1/s wheat bread	60	1 egg	114	2 eggs	228
1 pad butter	50	2/s bacon	98	2/s bacon	98
½C cantaloupe	36	1 glass o.j.	99	1 glass o.j.	99
1 C cereal	100	1 C coffee	2	2/s wheat toast	112
1 C coffee	2	2/s wheat toast	112	1 glass milk	159
LUNCH		**LUNCH**		**LUNCH**	
1 s/br. bread	101	4 oz. ground beef	250	10 french fries	156
1 C lima beans	82	2/s br. bread	202	4 oz. ground beef	250
1 C coffee	2	1 glass skim milk	89	1 glass milk	159
1 lamb chop	140	½ C cottage cheese	120		
1 ice cream bar	162	1 ear of corn	82		
		3 cookies	153		
DINNER		**DINNER**		**DINNER**	
4 oz. broiled chicken	155				
1 sm. baked potato	76	1 sweet potato	155	4 oz. roasted ham	213
1 glass skim milk	89	4 oz. round steak	218	1 C coffee	2
1 pad butter	50	½ C beets	43	1 baked potato	93
6 spears asparagus	21	1 C coffee	2	1/s cake	185
1 C cake	129	1/s apple pie	255		
TOTAL CALORIES		TOTAL CALORIES		TOTAL CALORIES	

FOLLOW - UP ACTIVITIES:

* Keep a record of the food you eat for three days. How many calories did you consume?
* Plan a balanced diet. List the calories for each food.

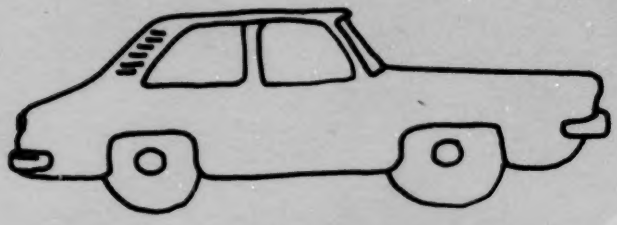
Count Your Calories
page 1

1)	Breakfast	248
	Lunch	487
	Dinner	520
		1,255
2)	Breakfast	425
	Lunch	896
	Dinner	673
		1,994
3)	Breakfast	696
	Lunch	565
	Dinner	493
		1,754

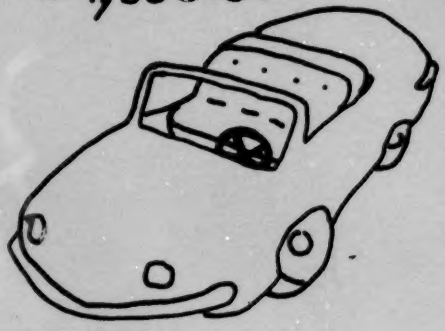
7/a

SUPER SALES... HAVE CAR WILL TRAVEL!

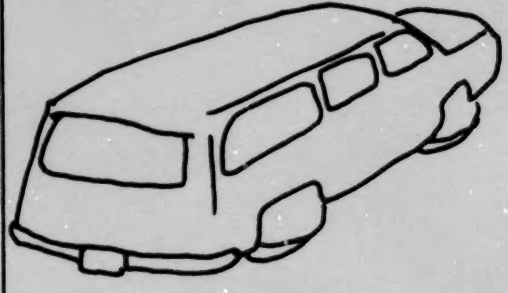
You just started as a sales person for the Buy-Rite Auto Sales and Leasing Company. You greet customers. Help them decide on car models that would suit their needs and the options they want. Here are the three basic car MODELS that you work with and the car OPTIONS that are offered from the manufacturer.



SEDAN...
BASE PRICE
$4,500.00



SPORTS MODEL...
BASE PRICE
$4,800.00



STATION WAGON...
BASE PRICE
$4800.00

...OPTIONS

AM Radio	$ 50.00
AM/FM w/Tape Deck	$120.00
Air Conditioning	$350.00
4.5 Liter Engine	$100.00
5.2 Liter Engine	$150.00
6 Liter Engine	$250.00
Power Windows	$ 45.00
R/Window Defrost	$ 30.00
Six Way Power Seats	$ 50.00
Special Interior/ Deep Pile Carpet, Walnut Dash	$130.00
Tinted Glass	$ 80.00
White S/W Tires	$ 34.00
Wheel Covers	$ 30.00

SUPER SALES - HAVE CAR WILL TRAVEL
CONTINUED

DIRECTIONS: *Fill in the charts and determine each customer cost.*

TYPE OF CAR _____ BASE PRICE _____

OPTIONS: _____ PRICE _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

TOTAL CUSTOMER COST: _____

TYPE OF CAR _____ BASE PRICE _____

OPTIONS: _____ PRICE _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

TOTAL CUSTOMER COST: _____

FOLLOW - UP ACTIVITIES:

* Use ads from newspapers for used car prices.
* Interview a sales person or invite speakers to your classroom.
* Compare car prices, different makes and models and different years.
* Design dream cars and determine the cost based on factual information.

CAREERS
Bookkeeper
Purchasing Agent
Accountant
Bank Officer
Bill Collector

BILLS !! BILLS !!

DIRECTIONS: A customer of Computer Electronics has complained that there is an error in the bill. As a bookkeeper for the company, you must find and correct the error.

REMEMBER: If a customer makes a payment, you credit the account by subtracting the payment. When an item is charged or debited to the account, you will add the amount to the account.

* *DEBITS ARE ADDED TO THE ACCOUNT WHILE CREDITS ARE SUBTRACTED* *

	DATE	TRANSACTION		BALANCE $486.19
1)	December 2	Debit	$ 36.81	
2)	December 4	Debit	$ 19.26	
3)	December 5	Credit	$250.00	
4)	December 7	Debit	$ 45.67	
5)	December 9	Debit	$ 4.06	
6)	December 9	Debit	$ 18.04	
7)	December 10	Debit	$ 46.18	
8)	December 12	Credit	$ 75.00	
9)	December 13	Debit	$ 18.04	
10)	December 15	Debit	$ 9.36	
11)	December 16	Debit	$ 38.90	
12)	December 17	Debit	$ 46.18	
13)	December 19	Credit	$100.00	
14)	December 20	Debit	$ 86.19	
15)	December 22	Debit	$ 14.89	

1) $523.00
2) 542.26
3) 292.26
4) 337.93
5) 341.99
6) 360.03
7) 406.21
8) 331.21
9) 349.25
10) 358.61
11) 397.51
12) 443.69
13) 343.69
14) 429.88
15) 444.77

CAREERS
Flight Attendant
Navigator
Travel Agent

ADDITION
SUBTRACTION 5

THE "FRIENDLY" SKIES

DIRECTIONS: *You are a flight attendant for an airline. As part of your job, you must compute how long it takes to travel from place to place. On the job you use the 24-hour clock -- times shown between 0001 (1 minute after midnight) and 1200 are a.m. times. Times shown from 1201 to 2359 are p.m. times. To convert p.m. time to the 12-hour clock subtract 12 hours.*

Complete the chart below showing the length of each trip. The first few are done for you. REMEMBER: USE CLOCK ADDITION AND SUBTRACTION.

	FLIGHT	DEPARTURE POINT	TIME OF DEPARTURE	ARRIVAL POINT	TIME OF ARRIVAL	LENGTH OF TRIP
1)	103	London	1055	New York	1530	4 hrs 35 min
2)	31	Los Angeles	1300	Hong Kong	2155	8 hrs 55 min
3)	516	Los Angeles	0600	London	1445	____ hrs ____ min
4)	552	Miami	1600	Mexico City	1815	____ hrs ____ min
5)	191	Austin	0230	New York	0600	____ hrs ____ min
6)	662	New York	2400	New Delhi	2345	____ hrs ____ min
7)	100	New York	1700	London	2140	____ hrs ____ min
8)	877	Chicago	1850	Denver	2155	____ hrs ____ min
9)	830	Tokyo	0700	Portland	1815	____ hrs ____ min
10)	443	Bangor	1810	Los Angeles	2359	____ hrs ____ min
11)	218	Caracas	0715	Houston	1525	____ hrs ____ min
12)	825	Dallas	0800	New York	1200	____ hrs ____ min
13)	603	Detroit	1700	Boston	1925	____ hrs ____ min
14)	841	Guam	0230	Manila	0550	____ hrs ____ min
15)	107	Hamburg	0815	London	0935	____ hrs ____ min

FOLLOW - UP ACTIVITIES:

* Figure fares, time of departure, arrival and length of trip for other means of transportation.
* Compare the cost of shipping a 8 lb. package by truck, air freight or rail.

The Friendly Skies
page 5

1) 4 hrs 35 min
2) 8 hrs 55 min
3) 8 hrs 45 min
4) 2 hrs 15 min
5) 3 hrs 30 min
6) 23 hrs 45 min
7) 4 hrs 40 min
8) 3 hrs 05 min
9) 11 hrs 15 min
10) 5 hrs 49 min
11) 8 hrs 10 min
12) 4 hrs 00 min
13) 2 hrs 25 min
14) 3 hrs 20 min
15) 1 hr 20 min

$300 TO SPEND

Directions: *Order 15 items totaling $300.00 from a catalogue of your choice. Correctly fill out the form below, and then compute your tax and totals.*

CATALOGUE _____
(name)

YOUR NAME _____

ADDRESS _____

CITY _____ STATE _____

QUANTITY	ITEM	UNIT PRICE	TOTAL PRICE

SUB TOTAL _____

5% Ill. Sales Tax _____

TOTAL _____

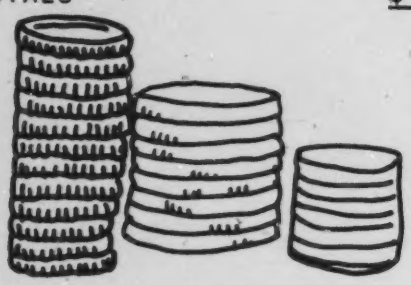
CAREERS
Accountant
Bank Teller
Bookkeeper

ADDITION
SUBTRACTION 7

DON'T BREAK THE BANK !!!

DIRECTIONS: *You are to determine the amount of the checks you handled today, the amount of money you returned to the customer and the amount that was deposited in the customer's accounts. Fill-in the chart below.*

CUSTOMER'S NAME	CHECKS GIVEN TO TELLER	AMT. RETURNED TO CUSTOMER	AMT. DEPST. IN CUSTOMER'S ACCT.
1) Fredrick Woods III	$ 350.00	$ 50.00	$ _____
2) Robert Hopeless	$ 400.00	$ 1.00	$ _____
3) Mary Tudor	$ 1,950.00	$ _____	$ 350.00
4) Jack Woodsides	$ _____	$ 75.00	$ 500.00
5) Marlyn Smith	$ 5,256.00	$ 397.00	$ _____
6) H. L. Find	$12,962.00	$ 13.00	$ _____
7) Harvey Lappin	$ 35.00	$ 17.00	$ _____
8) John Highrise	$ 967.00	$ _____	$ 392.00
9) Kari Cobbey	$ 168.00	$ 49.00	$ _____
10) Connie Bell	$ _____	$ 16.00	$ 72.00
11) Katy Summers	$13,978.00	$ 650.00	$ _____
12) TOTALS	$ _____	$ _____	$ _____



FOLLOW - UP ACTIVITIES:

* Develop a worksheet with your own amounts.
* Visit a bank or savings and loan association.
* Interview a banker, bookkeeper, teller or an accountant.
* Open a savings account of your own.

1)	$ 300.00
2)	399.00
3)	1,600.00
4)	575.00
5)	4,859.00
6)	12,949.00
7)	18.00
8)	575.00
9)	119.00
10)	88.00
11)	13,328.00
12)	36,729.00
	3,443.00
	33,286.00

THE THREE M'S

DIRECTIONS: *You are a math teacher. You have just given a test to your students. The test had 63 problems on it. You are to determine who should get A's, B's etc. There are many ways to determine a letter grade based on score. One way is to figure the percent correct and score 90-100% = A, 80-89% = B etc. Another way to determine grade breakdown is to find the mean (average) of all of the scores and call that score a "C".*

A Third way to determine grades is to find the mode of the whole class's scores and call that score a "C". (Mode means what score occurs most often) A fourth way is to find the median of the entire class's scores., Median is the middle score when you arrange all scores from highest to lowest.

EXAMPLE:

SCORES			
60	Mean :	$\frac{60+59+59+55+54}{5}$	= 57.4 or 57
59			
59	Median:	59	= Middle
55			
54	Mode :	59	= Occurs Most Often

Math Test Scores (63 points possible)

54	47	62	50	55	35	59	60
48	63	53	63	55	43	55	47

Determine which score would receive a "C" by each of the "M" methods as shown in the example.

Mean: _____

Median: _____

Mode: _____

FOLLOW UP ACTIVITIES:

* Now that you've determined which score(s) received a "C" how would you divide the A, B, C, D, and F grades for the rest of the scores?

* What would you do if there were 100 possible points and the mean score was 25?

Mean: $(\frac{849}{16} = 53.0625)$
rounded to 53

Median: (55)

Mode: (55)

TOYS AND HOBBIES

DIRECTIONS: You manage a toy and hobby shop. The window signs show prices of special sale items. Add the amount for each customer and then give the total including 5% sales tax (5% = .05)

HINT: To figure sales tax for the four customers multiply the sub total by .05 and round off to the nearest cent (2 decimal places). EXAMPLE: Sub Total is $38.49 x .05 = $1.92 tax.

SHOOTING GALLERY $13.44

POOL GAME $13.84

SKETCH SET $3.94

ELECTRIC FOOTBALL $17.95

ERECTOR SET $17.99

LEATHER CRAFT KIT $2.99

TALKING BANK $10.95

MODELS $1.88

ACTION DARTS $6.97

CUSTOMER #1

Model Shooting Gallery _____
Bank _____

Sub Total _____

Sales Tax _____

TOTAL _____

CUSTOMER # 2

Erector Set _____
Action Darts _____
Pool Game _____
Sketch Set _____

Sub Total _____

Sales Tax _____

TOTAL _____

CUSTOMER #3

Bank _____
Leather Kit _____
Electric Football _____
Model Plane _____

Sub Total _____

Sales Tax _____

TOTAL _____

CUSTOMER # 4

Pool Game _____
Shooting Gallery _____
Action Darts _____
Model Boat _____

Sub Total _____

Sales Tax _____

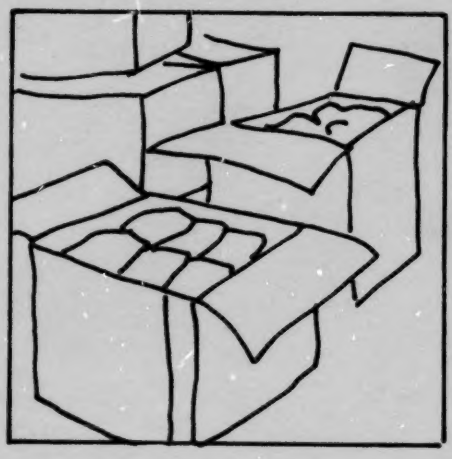
TOTAL _____

What is the Total for all four customers? (Including Sales Tax)

Customer #1 _____
Customer #2 _____
Customer #3 _____
Customer #4 _____
TOTAL _____

Customer #1	
Sub Total	26.27
Sales Tax	1.31
Total	$27.58
Customer #2	
Sub Total	42.74
Sales Tax	2.14
Total	$44.88
Customer #3	
Sub Total	33.77
Sales Tax	1.69
Total	$35.46
Customer #4	
Sub Total	36.13
Sales Tax	1.81
Total	$37.94
Grand Total	$145.86

BONUS !!!



DIRECTIONS: *You got a job in the receiving department of a large department store. You must open the boxes of merchandise as they are unloaded from trucks, check the inventory sheet to see that the correct amount had been received and put a price tag on each item.*

Your boss said that you will get a $5.00 bonus if you tag 1,500 or more items each day. STAR THE DAYS THAT YOU WILL GET A BONUS.

DAY	NO. OF BOXES	TYPE OF MERCHANDISE	NO. PER BOX	TOTAL ITEMS	TOTAL FOR DAY
1) Monday	50	towels	10	_____	
	10	handkerchiefs	24	_____	_____
2) Tuesday	40	bathroom scales	10	_____	
	23	purses	18	_____	_____
3) Wednesday	30	record albums	24	_____	
	19	kneesocks	30	_____	_____
4) Thursday	29	paint sets	24	_____	
	46	shoes	20	_____	_____
5) Friday	24	pen sets	50	_____	
	25	sweat shirts	24	_____	_____
Saturday		CLOSED			

FOLLOW - UP ACTIVITIES:

* Interview a receiving clerk, or visit a large department store to see what the pricing process is like.

* Set up a pricing process of your own. See how quickly you can open a box, price items, and move them along to the next department.

Bonus
page 1

1)	500	
	240	740
2)	400	
	414	814
3)	720	
	570	1,290
4)	696	
	920	*1,616
5)	1,200	
	600	*1,800

CAREERS
Receiving Clerk
Dock Manager

MULTIPLICATION
DIVISION 2

BOXES GALORE

DIRECTIONS: The Green Thumb Garden Supply Company has received the following INCOMPLETE SHIPPING RECEIPT. You are to complete the total number of boxes by dividing the items per box into the quantity given. You are given one example.

TO: The Green Thumb Garden Supply Company
FROM: National Distributors, Inc.
INVOICE NO. 6321 DELIVERY DATE _____

	ITEM	QUANTITY	ITEM PER BOX	NO. OF BOXES
1)	Pewter Flower Pots	288	12	24
2)	Hedge Trimmers	198	6	
3)	Flower Pots	396	2	
4)	Watering Cans	559	13	
5)	Plant Food	1,920	24	
6)	Perlite	17,496	36	
7)	Planting Soil	1,728	48	
8)	Garden Rakes	2,784	24	
9)	Lawn Hose	19,600	56	
10)	Sprinkler	576	8	
11)	Shovels	792	36	
12)	12' Ladders	148	4	
13)	6' Ladders	992	8	
14)	Wheel Barrels	90	2	
15)	Flower Boxes	1,008	28	

Driver's signature _____ TOTAL BOXES _____
Receiving Clerk _____
Date accepted _____

FOLLOW - UP ACTIVITIES:

* Using the same order form and figures, create some multiplication problems.
* Interview a person who orders large quantities of material.

1) 24
2) 33
3) 198
4) 43
5) 80
6) 486
7) 36
8) 116
9) 350
10) 72
11) 22
12) 37
13) 124
14) 45
15) 36
16) 1,702

COUNTING CUPS

DIRECTIONS: *You are a baker and you keep a record of how much flour is used for each type of baked goods each day, as well as how much of each baked goods you produce. Complete the chart below, using these recipes:*

BREAD	ROLLS	COOKIES
4 pkg. yeast	4 pkg. yeast	1 C butter
1 C water	1 C water	1 C sugar
8 C milk	1 C sugar	1 egg
8 t salt	1 C butter	1 t vanilla
8 T butter	4 t salt	1 t almond extract
24 C flour	14 C flour	4 C flour
Yield: 8 loaves	4 eggs	1 t baking soda
	Yield: 8 doz.	Yield: 6 doz.

BREAD

DAY	CUPS OF FLOUR	NO. OF RECIPES	HOW MANY LOAVES
Monday	240	_____	_____
Tuesday	192	_____	_____
Wednesday	120	_____	_____
Thursday	168	_____	_____
Friday	264	_____	_____

ROLLS

DAY	CUPS OF FLOUR	NO. OF RECIPES	HOW MANY DOZEN
Monday	126	_____	_____
Tuesday	98	_____	_____
Wednesday	70	_____	_____
Thursday	112	_____	_____
Friday	154	_____	_____

FOLLOW - UP ACTIVITIES:

* Visit a bakery and observe the process of making these baked goods.
* Determine price per loaf or roll based on the cost of ingredients.

COOKIES

DAY	CUPS OF FLOUR	NO. OF RECIPES	HOW MANY DOZEN
Monday	44	_____	_____
Tuesday	60	_____	_____
Wednesday	76	_____	_____
Thursday	84	_____	_____
Friday	100	_____	_____

Bread	
10	80
8	64
5	40
7	56
11	88

Rolls	
9	72 doz.
7	56 doz.
5	40 doz.
8	64 doz.
11	88 doz.

Cookies	
11	66 doz.
15	90 doz.
19	114 doz.
21	126 doz.
25	150 doz.

THE HIGH COST OF LIVING

DIRECTIONS: *As a sales person for a real estate company you must figure the price per square foot for each new listing. Below is the list of houses for sale, the price and total living space. Compute the cost per square foot for each home. Star the home that is the least expensive per square foot.*

Sample

18604 Roy Street
$45,000.00
6 rooms
1,500 square feet
30.00 per square foot

$$1{,}500 \overline{)\,45{,}000} \quad 30.$$
$$45{,}00$$

1) 320 East 42nd St.
$36,000.00
7 rooms
1,200 square feet
_____cost per sq ft

2) 680 Union Ave.
$52,000.00
7 rooms
2,600 square feet
_____cost per sq ft

3) 407 S. 218th Place
$75,000.00
6 rooms
3,000 square feet
_____cost per sq ft

4) 79 West 13th Ave.
$55,125.00
5 rooms
1,575 square feet
_____cost per sq ft

5) 18 Longwood Drive
$34,170.00
5 rooms
2,278 square feet
_____ cost per sq ft

6) 73 W. 79th Street
$37,070.00
4 rooms
1,685 square feet
_____cost per sq ft

7) 43 E. Dyer Road
$58,975.00
9 rooms
1,685 square feet
_____cost per sq ft

8) 18400 Exchange
$72,360.00
12 rooms
2,010 square feet
_____cost per sq ft

9) 18 Country Club Dr.
$121,000.00
12 rooms
3,025 square feet
_____cost per sq ft

FOLLOW - UP ACTIVITIES:

* Interview an appraiser, loan officer or a real estate salesperson.

* Use an adding machine or calculator to check problems. Discuss advantages and disadvantages of using a machine.

* Define the following real estate terms: appraisal, closing costs, commission, depreciation, downpayment, earnest money, equity, interest, lien, premium, points and principal.

1) $30.00
2) 20.00
3) 25.00
4) 35.00
5) 15.00 *
6) 22.00
7) 35.00
8) 36.00
9) 40.00

WHAT IS YOUR SPEED ?

DIRECTIONS: *One of the requirements for your job as secretary is to be able to type and take dictation. Your present speeds are:*

TYPING - 83 words per minute
DICTATION - 183 words per minute

Determine how long it would take you to do the following. (Round off fractions to the nearest whole minute)

1. Type a 1,245 word letter. _____
2. Type two original copies of a 913 word report. _____
3. Take a 5,412 word dictation from your boss. _____
4. Type a 400 word memo. _____
5. Take a 2,112 word dictation from a client. _____
6. Type three original copies of a newsletter that is 810 words long. _____
7. Type a 170 word statement. _____
8. Take a 1,420 word dictation from your boss. _____
9. Type six letters with 450 words each. _____
10. Take 1,980 words of dictation. _____

What is Your Speed?
page 5

1) 15 min.
2) 22 min.
3) 30 min.
4) 5 min.
5) 12 min.
6) 29 min.
7) 2 min.
8) 8 min.
9) 33 min.
10) 11 min.

CASH COUNT

DIRECTIONS: *You are the manager of a record store. At the end of each day, you have to re-count the cash received by each clerk. This was the cash count from register #2 for the day.*

Complete the count by multiplying the money value times the count. Total the money and compare the cash register tape reading with the total for shortage or overage.

		COUNT	CASH
1.	pennies	58	_____
2.	nickles	26	_____
3.	dimes	42	_____
4.	quarters	112	_____
5.	half dollars	8	_____
6.	silver dollars	3	_____
7.	one dollar bills	78	_____
8.	two dollar bills	4	_____
9.	five dollar bills	80	_____
10.	ten dollar bills	49	_____
11.	twenty dollar bills	16	_____
12.	fifty dollar bills	3	_____
13.	one hundred dollar bills	2	_____
14.	Total count	____	_____ (Total Value)

Cash Register #2 Tape $1,699.11

Shortage _____

Overage _____

Signature _____ _____

Date _____

Cash Count
page 6

1)	$	.58
2)		1.30
3)		4.20
4)		28.00
5)		4.00
6)		3.00
7)		78.00
8)		8.00
9)		400.00
10)		490.00
11)		320.00
12)		150.00
13)		200.00
14)		1,687.08
Shortage		12.03
Count		481

UP, UP AND AWAY

DIRECTIONS: *You are a pilot preparing to depart on a weekend chartered flight. You must check the weight of the loaded plane and compare this total to the allowable maximum weight. Complete the flight charts below by multiplying to determine the weight of each. Total the poundage and determine if you are over or under the allowable weight.*

FLIGHT: A321-4 DEPARTURE DATE: 9/11 TIME: 1630

ITEM	NUMBER	UNIT WEIGHT	TOTAL
Empty Plane	1	1,242 lb.	
Pilot	1	175	
Passengers	5	150	
Fuel	38 gal.	6	
Oil	8 qt.	7.5	
Baggage	5	10	
Cartons	10	5.6	
Maximum Wieght Allowance		2,300 lb.	
Check: _____ Shortage Amount			(Total)
_____ Overage Amount			
(Pilot's Signature)			(Date)

FLIGHT: A344-9 DEPARTURE DATE: 12/15 TIME: 0900

ITEM	NUMBER	UNIT WEIGHT	TOTAL
Empty Plane	1	1,242 lb.	
Pilot	1	175	
Passengers	2	150	
Fuel	50 gal.	6	
Oil	8 qt.	7.5	
Baggage	4	10	
Boxes	6	12	
Equipment	4	6.5	
Maximum Weight Allowance		2,300 lb.	
Check: _____ Shortage Amount			(Total)
_____ Overage Amount			
(Pilot's Signature)			(Date)

Flight A321-4	Flight A344-9
1,242 lbs.	1,242 lbs.
175	175
750	300
228	300
60	60
50	40
56	72
2,561	26
Overage 261	2,215
	Shortage 85

THAT'S A LOT OF CORN

DIRECTIONS: *You are a farmer. In your area the amount of corn that you can expect to harvest is 325 bushels per acre. Given the size of each farm determine how many bushels of corn you and your neighbors can expect to harvest.*

1. You have 850 acres of corn planted so you can expect _____ bushels of corn.

2. Mrs. Robins planted 600 acres of corn. She will get _____ bushels of corn.

3. Mr. Powell planted 475 acres of corn. He will get _____ bushels of corn.

4. Mrs. King planted 950 acres of corn. She will get _____ bushels of corn.

5. Mrs. Brown planted 750 acres of corn. She will get _____ bushels of corn.

6. Mr. Anderson planted 300 acres of corn. He will get _____ bushels of corn.

7. Mr. Wang planted 505 acres of corn. He will get _____ bushels of corn.

8. Mr. Jasinski planted 1,200 acres of corn. He will get _____ bushels of corn.

9. The total amount for you and your neighbor is _____ bushels of corn.

That's A Lot
Of Corn
page 8

1) 276,250
2) 195,000
3) 154,375
4) 308,750
5) 243,750
6) 97,500
7) 164,125
8) 390,000
9) 1,829,750

CLASS RECORD BOOK

It's report card time, you have to add each students points and average them for a grade for the first grading period. Determine the distribution by counting the number of each letter grade.

2nd Hour Social Studies

		HOMEWORK		CLASSWORK WORKSHEETS		MAP SKILLS		QUIZES		CHAPTER TESTS		TOTAL	AVG.	LETTER GRADE
Brehm, Jill	1.	90	75	80	100	86	88	100	79	96	93	1.		
Clark, Ann	2.	70	71	100	88	89	62	100	77	91	98	2.		
Gardiner, Paul	3.	100	77	100	67	82	83	100	61	100	100	3.		
Lulkowski, Tammy	4.	50	60	100	90	100	82	40	100	61	84	4.		
Nolan, Jamice	5.	77	80	63	78	99	66	100	100	70	100	5.		
Perl, Joe	6.	63	66	77	96	100	76	100	72	30	100	6.		
Pursuer, Cindy	7.	100	88	82	97	68	0	100	80	90	96	7.		
Sweeney, William	8.	60	96	90	86	100	0	83	97	100	100	8.		
Vrbanoff, Allen	9.	100	90	100	92	100	82	100	100	86	92	9.		
Woelffer, Dan	10.	95	98	100	100	92	86	86	100	100	98	10.		

GRADING SCALE

95 - 100 = A

94 - 88 = B

87 - 79 = C

78 - 71 = D

70 - 0 = F

DISTRIBUTION FIRST GRADING PERIOD

A	B	C	D	F

Class Record Book
page 9

1)	887	88.7	B
2)	846	84.6	C
3)	870	87.0	C
4)	767	76.7	D
5)	833	83.3	C
6)	780	78.0	D
7)	801	80.1	C
8)	812	81.2	C
9)	942	94.2	B
10)	955	95.5	A

1-A 2-B 5-C 2-D 0-F

PENNY WATCHING

DIRECTIONS: *You are doing your weekly grocery shopping. Prices seem to be going up all the time, so you decide to compare prices per unit before selecting an item. Determine the cost per gram, liter, or unit for each product and indicate the better buy.*

EXAMPLE: $41\overline{)\,.290}\;\;.007$ $\qquad$ $66\overline{)\,.400}\;\;.006$

	ITEM	QUANTITY	PRICE	PRICE / QUANTITY	BEST BUY
1)	Peas	41g	.29	$\frac{.29}{41} = .007$	
		66g	.40	$\frac{.40}{66} = .006$	66g
2)	Frozen Pizza	62g	1.57	_____	
		100g	2.25	_____	_____
3)	Milk	1L	.48	_____	
		2L	.90	_____	_____
4)	Cheese	100g	.45	_____	
		150g	.79	_____	_____
5)	Detergent	2kg	2.29	_____	
		2.5kg	3.10	_____	_____
6)	Yogurt	3	1.00	_____	
		5	1.30	_____	_____
7)	Pie Filling	510g	.98	_____	
		220g	.45	_____	_____

Penny Watching
page 1-2

	Price Quantity	Best Buy
1)	.007	
	.006	66g
2)	.025	
	.022	100g
3)	.48	
	.45	2L
4)	.004	
	.005	100g
5)	1.14	
	1.24	2kg
6)	.333	
	.260	5
7)	.001	
	.002	510g
8)	.07	
	.08	24
9)	.89	
	1.084	1L
10)	.002	
	.003	290g
11)	.86	
	.89	.75kg
12)	1.05	
	1.05	same
13)	.05	
	.04	20

PENNY WATCHING - CONTINUED

	ITEM	QUANTITY	PRICE	PRICE / QUANTITY	BEST BUY
8)	Disposable Diapers	24	1.80	_____	
		12	.97	_____	_____
9)	Shampoo	1L	.89	_____	
		5L	5.47	_____	_____
10)	Cereal	290g	.79	_____	
		450	1.35	_____	_____
11)	Onions	.75kg	.65	_____	
		1kg	.89	_____	_____
12)	Dog Food	3kg	3.15	_____	
		5kg	5.25	_____	_____
13)	Carrots	15	.89	_____	
		20	.99	_____	_____

FOLLOW - UP ACTIVITIES

* Go to the grocery store and price all the various brands and sizes of one particular item. Determine the "best buy" for this item.

* Price various items one buys in packages or bulk (kleenex, package of paper, bobby pins, gum, life-savers, etc.). Determine the actual price per unit of each. The results are surprising.

CAREERS
Secretary
Clerk
Librarian

SCHOOL SUPPLIES

DIRECTIONS: *As the school secretary you must order basic office supplies for the school year. Complete the order form to see how much the office supplies will cost.*

	QUANTITY	PRODUCT DESCRIPTION	PRICE PER UNIT	TOTAL
1)	15 boxes	letter size 9 1/2" x 11 3/4" standard manilla folders	4.25/box	
2)	5 boxes	6" x 9" metal clasp envelopes	4.49/box	
3)	5 boxes	10" x 13" metal clasp envelopes	7.39/box	
4)	1 box	erasers	2.25/box	
5)	45 dozen	#2 pencils	1.19/dozen	
6)	20 dozen	medium ball point pens - black	2.19/dozen	
7)	15 rolls	2" x 60 yard roll masking tape	2.99/each	
8)	10	22 oz. size glue	1.95/each	
9)	6 boxes	5 x 8 ruled index cards	8.69/box	
10)	10 boxes	staples	.92/box	
11)	1	stapler	3.25/each	
12)	5	desk pad	2.65/each	
13)	5	wall calendars	4.49/each	
14)	2	letter openers	.50/each	
15)	2	pen holders	1.95/each	

Sub Total _____

Less 7% Discount _____

Total After Discount _____

Illinois Sales Tax @5% _____

Grand Total _____

School Supplies
page 3

1)	$63.75
2)	22.45
3)	36.95
4)	2.25
5)	53.55
6)	43.80
7)	44.85
8)	19.50
9)	52.14
10)	9.20
11)	3.25
12)	13.25
13)	22.45
14)	1.00
15)	3.90
Sub Total	$392.29
Less 7%	27.46
After Disc.	364.83
Ill. Tax	18.24
TOTAL	383.07

MILES PER GALLON

DIRECTIONS: You have just finished training to be a used car salesperson. You must be prepared with information about each particular car if you want to do a good job of selling. One question that will be asked is, "What is the gas mileage for this car?" Determine the mpg (miles per gallon) for each car below.

	YEAR	MAKE	MILES	GALLON	
1)	1971	station wagon	21	1.4	$\frac{21 \text{ miles}}{1.4 \text{ gallons}} = 15$
2)	1975	sedan	24	3.5	
3)	1975	convertible	21	.75	
4)	1977	sports car	27	3.1	
5)	1974	truck	21	2.4	
6)	1974	four door	27	1.5	
7)	1974	sports car	24	0.8	

FOLLOW - UP ACTIVITIES

* Interview a car salesperson to see what skills are needed to sell cars.
* Determine your family car's mpg.

Miles Per Gallon
page 4

1) 15
2) 6.8
3) 28
4) 8.7
5) 8.75
6) 18
7) 30

GROWING UP AND OUT

DIRECTIONS: *You are a nurse in a pediatrician's office. You must record each child's height and weight at their annual check-up visit and the change. Several children's statistics are listed below. Fill in the change in the correct space.*

1) Mandel, John

DATE	HT.	WT.	CHANGE
4-11-74	.50m	8.4kg	
4-23-75	.75m	8.7kg	___m ___kg

2) Applebaum, Fred

DATE	HT.	WT.	CHANGE
7-16-74	1.19m	21.3kg	
7-29-75	1.23m	27.8kg	___m ___kg

3) Cleary, Stephen

DATE	HT.	WT.	CHANGE
3-15-75	.91m	13.0kg	
3-10-76	1.00m	15.3kg	___m ___kg

4) Smith, Yula

DATE	HT.	WT.	CHANGE
1-10-76	1.07m	18.7kg	
1-29-77	1.12m	19.5kg	___m ___kg

5) Martinez, Susan

DATE	HT.	WT.	CHANGE
2-3-76	1.38m	32.0kg	
4-7-77	1.43m	36.6kg	___m ___kg

6) Shun, Wesley

DATE	HT.	WT.	CHANGE.
3-2-74	.80m	11.2kg	
5-7-75	.95m	14.2kg	___m ___kg

FOLLOW - UP ACTIVITIES

* Interview a pediatrician or a pediatric nurse to gain insight on all the tasks involved in a health check up.

1) .25m .3kg
2) .04m 6.5kg
3) .09m 2.3kg
4) .05m .8kg
5) .05m 4.6kg
6) .15m 3.0kg

SUPPLY REORDERING

DIRECTIONS: You are a supply clerk at a major bank and you must compile and compute the cost of the supply orders. Here are the orders that you received for this ordering period:

Carlo: 2 boxes deposit slips 2 boxes withdrawal slips 2 rolls adding machine tape 12 pencils 1 box of stationery	**Jeff:** 2 boxes deposit slips 2 boxes withdrawal slips 1 box paper clips 3 fine point pens 1 bottle wite-out
Kay: 3 boxes deposit slips 3 boxes withdrawal slips 5 fine point pens 12 pencils 2 boxes of envelopes 1 box of stationery	**Jody:** 2 boxes deposit slips 2 boxes withdrawal slips 12 pencils 1 box paper clips 1 ream copy paper 1 box small rubber bands

Fill in the order sheet below and compute the final cost for this department's supplies.

	ITEM	AMOUNT	COST/ITEM	COST
1)	Deposit slips	9	1.00/box	$9.00
2)	Withdrawal slips		1.00/box	
3)	Fine point pens		.25/each	
4)	Pencils		.59/dozen	
5)	Envelopes		1.79/box	
6)	Stationery		4.89/box	
7)	Paper clips		.59/box	
8)	Copy paper		3.10/ream	
9)	Adding maching tape		1.25/each	
10)	Rubber bands		2.25/box	
11)	Carbon paper		.79/box	
12)	"Wite-out"		.59/bottle	
			TOTAL	

Supply Reordering
page 6

Amt.	Total
1) 9	$9.00
2) 9	9.00
3) 8	2.00
4) 3	1.77
5) 2	3.58
6) 2	9.78
7) 2	1.18
8) 1	3.10
9) 2	2.50
10) 1	2.25
11) 0	.00
12) 1	.59
TOTAL	44.75

GETTING AROUND

DIRECTIONS: *You are a driver for a parcel service. Your job is to deliver goods which are shipped through your company. At the end of each week you must report your total distance traveled for that week. You must keep track of the distance traveled between stops. Here are your stops for each day of the week. Find your daily total and your total for the week.*

MONDAY		TUESDAY		WEDNESDAY	
To 411 Elm	8.3 km	To 1440 Elm	8.6 km	To 405 Main	3.8 km
To 31 Main	4.9 km	To 88 Oak	7.4 km	To 38 Chicago Rd.	7.3 km
To 1001 Oak	6.2 km	To 82 14th	14.3 km	To 112 Oak	4.6 km
To 555 Rural	11.8 km	To 41 E. 5th	16.9 km	To 331 Regal Rd.	10.2 km
To 81 Wood	14.8 km	To A.P.S. Center	7.8 km	To 300 Main	7 km
To A.P.S. Center	9.6 km			To A.P.S. Center	3.5 km
Daily Total	_____	Daily Total	_____	Daily Total	_____

THURSDAY		FRIDAY	
To 891 Wood	13.3 km	To 19 King Rd.	23.3 km
To 333 Maple	4 km	To Box 12 14th	7.5 km
To 121 Western	9.9 km	To 22 Oak	12.7 km
To 904 Lake	.3 km	To 4923 Main	1.4 km
To 21 Oak	2.4 km	To A.P.S. Center	3.9 km
To 890 Elm	4.4 km		
To A.P.S. Center	9.6 km		
Daily Total	_____	Daily Total	_____

Grand Total for the Week _____

Getting Around
page 7

Monday	55.6km
Tuesday	55.0km
Wednesday	36.4km
Thursday	43.9km
Friday	48.8km
Grand Total	239.7km

MAKING CHANGE

DIRECTIONS: You are a cashier at a food store. You are to give correct change to the customer using the largest unit of money possible. The following are seven customers and their purchases. Please list the correct number of coins and dollars that you gave each customer. Put a zero in the space if you do not use that denomination in making change.

Remember to use half dollars and two dollar bills!!

Customer	Total Purchase	Money Paid	Customer's Change
1.	$14.82	$20.00	_____
2.	9.11	20.00	_____
3.	.86	5.00	_____
4.	32.09	50.09	_____
5.	.16	1.01	_____
6.	11.86	15.01	_____
7.	8.81	50.00	_____

Pennies	Nickles	Dimes	Quarters.	Half Dollars	$1.00	$2.00	$5.00	$10.00	$20.00

1) $ 5.18
2) 10.89
3) 4.14
4) 18.00
5) .85
6) 3.15
7) 41.19

3	1	1	0	0	0	0	1	0	0
4	0	1	1	1	0	0	0	1	0
4	0	1	0	0	0	2	0	0	0
0	0	0	0	0	1	1	1	1	0
0	0	1	1	1	0	0	0	0	0
0	1	1	0	0	1	1	0	0	0
4	1	1	0	0	1	0	0	0	2

TIME CARDS

CAREERS
Payroll Clerk
Manager
Accountant

DECIMALS 9

DIRECTIONS: *It's the end of the week, you are the payroll clerk for an office supply store. You have to figure the gross pay before taxes for the following employees. This gross pay will include their regular pay plus overtime. Overtime pay should be computed at 1.5 times the hourly rate.*

PAYROLL SHEET WEEK OF NOVEMBER 1, 1977

	HOURS WORKED	HOURS OVERTIME	HOURLY SALARY	REGULAR PAY	OVERTIME	GROSS PAY
1. Cindy Glover	40	2	$3.50			
2. Nancy Waters	20	0	3.15			
3. Robert Nichols	40	5	3.60			
4. Jose Rameriz	40	10	3.80			
5. Pat Kenmotsu	36	0	4.10			
			Total Payroll			

Time Cards
page 9

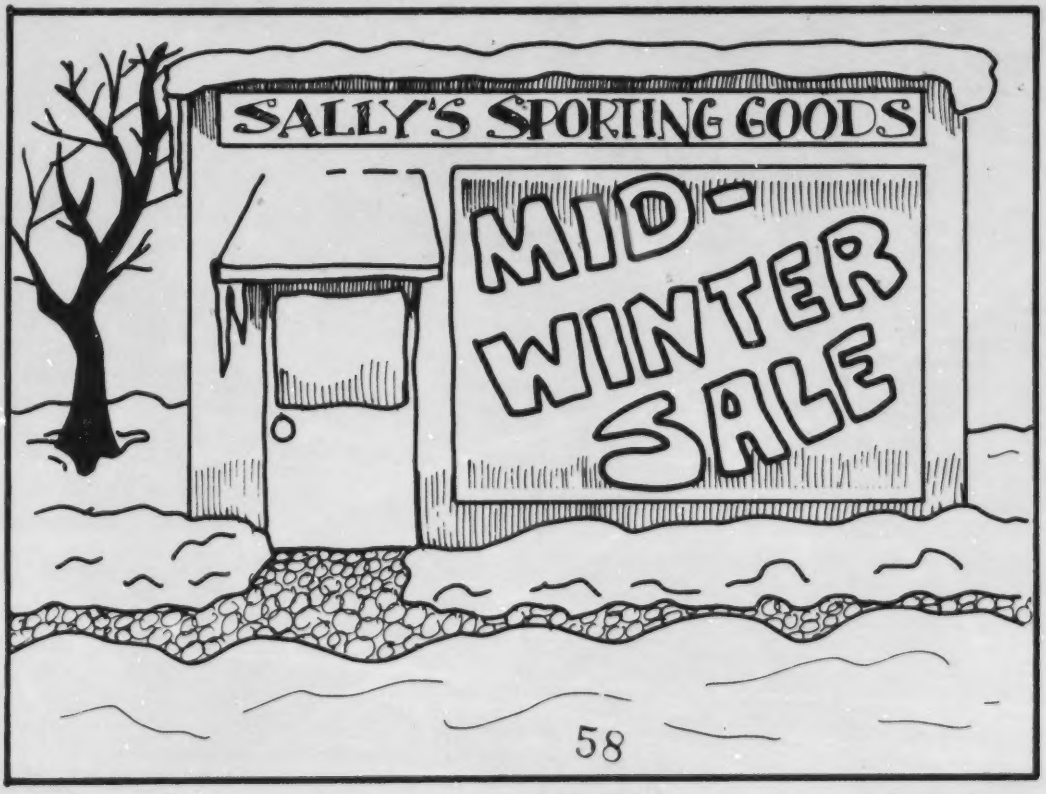
	Regular	Overtime	Gross
1)	$140.00	$10.50	$150.50
2)	63.00	0	63.00
3)	144.00	27.00	171.00
4)	152.00	57.00	209.00
5)	147.60	0	147.60
6)	646.60	94.50	741.10

CAREERS
Auditor
Accountant
Purchasing Agent

ORDER FORM

DIRECTIONS: *You are a puchasing agent for a sporting goods store. The following is an order form for equipment that you are purchasing for the store. Find the total cost per item.*

	ITEM	QUANITY	COST PER ITEM	TOTAL COST
1.	tennis balls	10 boxes	$ 2.19	_____
2.	tennis rackets	12	$ 7.88	_____
3.	football helmets	24	$ 9.19	_____
4.	footballs	36	$ 8.19	_____
5.	football jerseys	48	$ 5.89	_____
6.	baseball bats	24	$ 1.97	_____
7.	baseballs	12	$ 1.79	_____
8.	baseball gloves	12	$ 8.95	_____
9.	golf balls	12 doz.	$ 3.88	_____
10.	golf bags	12	$19.77	_____



1) $ 21.90
2) 94.56
3) 220.56
4) 294.84
5) 282.72
6) 47.28
7) 21.48
8) 107.40
9) 46.56
10) 237.24

CAREERS
Restaurant Manager
Bookkeeper
Waitress/Waiter

TIPS I

DIRECTIONS: *When people work in a restaurant they receive extra money called tips from customers who like the way they are served. Jose, Elaine, Sam, Sylvia, and Kim decided to split their tips equally for two weeks. Figure how much each person gets at the end of both weeks by adding each column and dividing each total by the number of employees.*

Jose	$30.95	Jose	$28.90
Elaine	29.33	Elaine	22.35
Sam	24.12	Sam	30.32
Sylvia	22.30	Sylvia	28.40
Kim	23.15	Kim	31.33
TOTAL	_____	TOTAL	_____
Amount each received	_____	Amount each received	_____

After two weeks they decided to stop dividing their tips. Why do you think they didn't want to do this anymore?

_____

_____

_____

Tips
page 11

First Week
Total $129.85
Each Receives 25.97

Second Week
Total $141.30
Each Receives 28.26

YOUR CHECKBOOK

DIRECTIONS: *After you write out a check, you should record all the information in your checkbook. Here are a few checks that you have written. Correctly record each in the check register and determine the balance.*

293	General Ring Company	$62.11
294	Yards Department Store	35.00
295	Midwest Electric Company	58.96
296	Western Gas Company	91.76
297	Dr. Stephan J. Cleary	10.00
298	Telephone Company	12.39
299	Walton's Shoe Store	15.32
300	O'Brian's Meat Market	11.24

Check No.	Date	Check Issued To	Amt. of Check		Amt. of Deposit		Balance	
	12-11				297	66	297	66

Your Checkbook
page 12

1) $235.55
2) 200.55
3) 141.59
4) 49.83
5) 39.83
6) 27.44
7) 12.12
8) .88

PAYING YOUR BILLS

DIRECTIONS: *It's time for you to pay your monthly bills. Complete these checks to the following:*

General Ring Company	*$62.11*
Yards Department Store	*35.00*
Midwest Electric Company	*58.96*

293

_____ 19___

Pay To The
Order Of _____ $ _____

_____ Dollars

Your Bank
Your Town, Ill. _____

294

_____ 19___

Pay To The
Order Of _____ $ _____

_____ Dollars

Your Bank
Your Town, Ill. _____

295

_____ 19___

Pay To The
Order Of _____ $ _____

_____ _____ Dollars

Your Bank
Your Town, Ill. _____

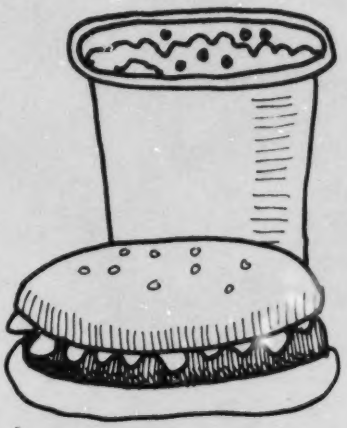
HUNGRY PEOPLE !

DIRECTIONS: *You work at Mick and Mac's Restaurant. Here is a copy of their menu. A bus load of students on a field trip stop and place one giant order. You must compute the total bill for all the students. GOOD LUCK!*

MICK AND MAC'S

Mickey Burger....30
Cheese Mac.....40
Double Mac.....65
Mickey Fin.....35 (fish)
French Fries.....25
Lg French Fries..40

Cola - Small.....20
Cola - Large.....30
Root Beer.....25
Shakes.....40
Pie.....30
Dairy Freeze.....25



QUANTITY	ITEM	PRICE	TOTAL
23	Mickey Burger		
17	Cheese Mac		
11	Double Mac		
6	Mickey Fin		
18	Small French Fries		
12	Large French Fries		
9	Small Cola		
16	Large Cola		
7	Root Beer		
14	Shakes		
6	Pie		
13	Dairy Freeze		

HINT: To Figure tax multiply total of all items by .05 and round to nearest cent (two decimal places).

Total of all items _____

Sales tax 5% _____

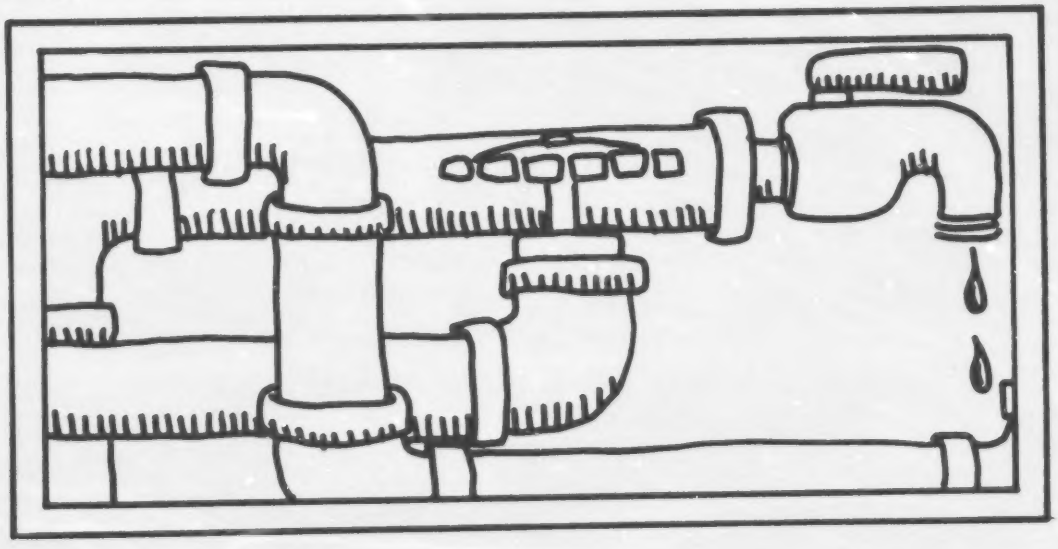
Total with tax _____

	Price	Total
1)	.30	$6.90
2)	.40	6.80
3)	.65	7.15
4)	.35	2.10
5)	.25	4.50
6)	.40	4.80
7)	.20	1.80
8)	.30	4.80
9)	.25	1.75
10)	.40	5.60
11)	.30	1.80
12)	.25	3.25
Total		51.25
5% tax		2.56
Grand Total		53.81

THE PLUMBER'S COST

DIRECTIONS: *You are a plumber working on a large construction site. Every day you keep track of all materials used. Here is one days list. What is the cost of the plumber's materials?*

ITEM	QUANTITY	COST	TOTAL COST
3" Coupling	48	$ .55	$ _____
Sanitary Tee	24	1.69	_____
90° Elbow	12	1.29	_____
Slip Plug	12	.49	_____
45° Elbow	6	1.09	_____
"P" Trap	10	2.59	_____
Solvent Cement	2	2.39	_____
Sewer Pipe	5	6.80	_____
Faucet	4	21.95	_____
Sump Pump	3	49.99	_____
Laundry Tub	2	31.99	_____
Valve	6	2.59	_____
	TOTAL COST		$ _____



The Plumber's Cost
page 15

1)	$ 26.40
2)	40.56
3)	15.48
4)	5.88
5)	6.54
6)	25.90
7)	4.78
8)	34.00
9)	87.80
10)	149.97
11)	63.98
12)	15.54
13)	476.83

FARM LAND

DIRECTIONS: *You sell farm land. Below is a list of farms, the new buyers, and the portion that each person is purchasing. Figure the number of acres each person is buying.*

LONGHORN RANCH - 720 Acres

1)	Janet Nare	1/4	_____
2)	Juan Hernandez	5/8	_____
3)	Wing Lo	1/8	_____

WESTWARD HO FARM - 1800 Acres

4)	Richard Benjamin	3/8	_____
5)	Mary Mc Mahan	1/2	_____
6)	Steve Molnaar	1/8	_____

CIRCLE B FARM - 4300 Acres

7)	Paul Morningstar	2/5	_____
8)	Jackson Kenney	3/10	_____
9)	Wilma Smothers	1/10	_____
10)	Carol Carter	1/5	_____

FOLLOW - UP ACTIVITIES:

* Call a local farmer to find out how the acres are divided for planting.
* Ask a farmer about planting crops. Are they all planted at the same time of year? Are they always planted in the same section of the farm?

Farm Land
page 1

1)	180	acres
2)	450	
3)	90	
4)	675	
5)	900	
6)	225	
7)	1,720	
8)	1,290	
9)	430	
10)	860	

COOKIES

DIRECTIONS: Read each recipe carefully, noting the ingredients and the yield of each recipe. Increase the recipe according to the need.

CHOCOLATE DROP COOKIES

4 1/2 DOZEN	9 DOZEN (times 2)	13 1/2 DOZEN (times 3)	18 DOZEN (times 4)
1/2 C. butter			
1 C. sugar			
1 egg			
2 oz. melted unsweetened chocolate			
1/3 C. buttermilk			
1 t. vanilla			
1 3/4 C. flour			
1/2 t. soda			
1/2 t. salt			
1 C. chopped nuts			

CHOCOLATE

8 SERVINGS	16 SERVINGS (times 2)	20 SERVINGS (times 2½)	26 SERVINGS (times 3¼)
3 oz. unsweetened chocolate			
1/2 C. sugar			
3 T. instant coffee			
1 t. cinnamon			
1/2 t. nutmeg			
1/4 t. salt			
1 1/2 C. water			
4 C. milk			
1 C. whipped cream			

Chocolate Drop Cookies

1	1 1/2	2
2	3	4
2	3	4
4	6	8
2/3	1	1 1/3
2	3	4
3 1/2	5 1/4	7
1	1 1/2	2
1	1 1/2	2
2	3	4

Chocolate

6	7 1/2	9 3/4
1	1 1/4	1 5/8
6	7 1/2	9 3/4
2	2 1/2	3 1/4
1	1 1/4	1 5/8
1/2	5/8	13/16
3	3 3/4	4 7/8
8	10	13
2	2 1/2	3 1/4

MEATCUTTER'S BLUES

DIRECTIONS: *As a butcher for a supermarket, you must cut the meat, weigh it and price it. Complete the chart below showing the total price. (Price per pound x weight = total price)*

	CUT OF MEAT	PRICE PER POUND	NUMBER OF POUNDS	TOTAL PRICE
1)	Ground Round	$1.36	5 1/2	7.48
2)	Ground Chuck	$1.18	4 1/3	
3)	Ground Beef	$1.24	6 1/4	
4)	Pork Chops	$1.60	5 1/8	
5)	Round Steak	$1.98	6 2/3	
6)	Chuck Roast	$2.14	6 1/2	
7)	Sirloin Steak	$2.05	5 3/4	
8)	Beef Roast	$3.09	8 2/3	
9)	T-Bone Steak	$2.48	3 1/8	
10)	Club Steak	$2.17	5	
11)	Flank Steak	$1.98	6 1/2	
12)	Lamb Chops	$1.69	3 1/3	
13)	Whole Chicken	$1.87	4 5/8	
14)	Rump Roast	$1.96	5 1/7	
15)	Beef Brisket	$1.63	4 1/8	

FOLLOW - UP ACTIVITIES:

* Interview a butcher, supermarket manager. Ask them to explain how items are priced in a store.

* Compute the cost per pound of: laundry detergent, fruits and vegetables.

1)	$ 7.48
2)	5.11
3)	7.75
4)	8.20
5)	13.20
6)	13.91
7)	11.79
8)	26.78
9)	7.75
10)	10.85
11)	12.87
12)	5.63
13)	8.65
14)	10.08
15)	6.72

AN AVERAGE SIZE

DIRECTIONS: *You are working as a clerk in a large shoe store. The store manager asked you to keep track of the sizes of shoes you sold. Compute the average shoe size by adding and dividing that total by the number of pairs of shoes.*

MEN'S	WOMEN'S	CHILDREN'S	INFANT
8 1/2	6	1	2
9	5 1/2	3	1 1/2
8 1/2	7	4 1/2	2
10	6 1/2	2	3
9 1/2	7	5	4
9	8 1/2	6	2 1/2
7	9	7 1/2	6
11	8	5	
9	6	2	
8 1/2	5		
	8 1/2		
TOTAL _____	_____	_____	_____
AVERAGE SIZE _____	_____	_____	_____

* Ask 8 of your classmates for their shoe size. Determine the average size.

NAME	SIZE	NAME	SIZE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Men's - 9

Women's - 7

Children's - 4

Infant's - 3

AN INVITING INCENTIVE

DIRECTIONS: *You are working on an assembly line in a factory which manufactures widgets. You are paid $5.48 per hour and an "incentive" of 23½¢ per widget produced. Following is a record of your work schedule for last week. Determine your pay for each day, and then for the week.*

FORMULA: *(hours worked x pay rate)+(widgets produced x incentive pay) = daily pay.*

	WORKING HOURS		WIDGETS PRODUCED		DAILY PAY
EXAMPLE:	5.48 per hr.		.23½ per widget		TOTAL
MONDAY	4	$21.92	34	$7.99	$29.91

	WORKING HOURS		WIDGETS PRODUCED		DAILY PAY	
	5.48 per hr.		.23½ per widget		TOTAL $	
MONDAY	8	_____	34	_____	_____	
TUESDAY	8	_____	38	_____	_____	
WEDNESDAY	8	_____	31	_____	_____	
THURSDAY	9	_____	44	_____	_____	
FRIDAY	9	_____	42	_____	_____	_____ (Total for the week)

Monday $43.84	$ 7.99	$51.83
Tuesday 43.84	8.93	52.77
Wednesday 43.84	7.29	51.13
Thursday 49.32	10.34	59.66
Friday 49.32	9.87	59.19
Total		$274.58

CAREERS
Homemaker
Bookkeeper
Clerk

PERCENT 1

YOUR SAVINGS EARN MORE . . . .

DIRECTIONS: As a bookkeeper for a Federal Savings, you must compute the interest on several accounts. Figure the percent of interest for each account listed below. (Balance X percent of interest = interest)

PASSBOOK ACCOUNTS:

	Account Number	Balance	Interest 5%
1)	95-807-6	$ 4,386.21 x .05 =	$219.31
2)	95-807-7	$ 5,267.32	
3)	95-807-8	$ 89.50	
4)	95-807-9	$ 58.73	
5)	95-808-1	$ 186.92	
6)	95-808-2	$ 487.35	
7)	95-808-3	$ 909.99	
8)	95-808-4	$ 481.37	
9)	95-808-5	$50,486.19	
10)	95-808-6	$ 3,807.03	

TIME ACCOUNTS

	Account Number	Balance	Interest 6%
1)	32-895-6	$ 4,006.00	
2)	32-895-7	$ 3,281.00	
3)	32-895-8	$ 586.31	
4)	32-895-9	$ 407.30	
5)	32-896-1	$ 61.61	
6)	32-896-2	$ 509.18	
7)	32-896-3	$ 37.24	
8)	32-896-4	$ 616.19	
9)	32-896-5	$ 437.19	
10)	32-896-6	$ 808.08	

Your Savings
Earn More
page 1

Passbook Acc't	
1)	$ 219.31
2)	263.37
3)	4.48
4)	2.94
5)	9.35
6)	24.37
7)	45.50
8)	24.07
9)	2,524.31
10)	190.35

Time Acc't	
1)	$ 240.36
2)	196.86
3)	35.18
4)	24.44
5)	3.70
6)	30.55
7)	2.23
8)	36.97
9)	26.23
10)	48.48

COMMISSION

DIRECTIONS: *Working for a real estate company, you are paid on commission which is a percentage of the value of a sale.*

There are 10 people who work at the real estate company in sales.

Their total sales for the month of May are recorded on the chart below. Figure each commission for the month of May. (Remember: Percent x Sales = Commission)

MAY SALES

	NAME	RATE OF COMMISSION	AMOUNT OF SALES	AMOUNT OF COMMISSION
1)	Bob	8%	$ 67,490.	_____
2)	Joe	8%	$ 98,300.	_____
3)	Lee	8%	$ 54,000.	_____
4)	Phyllis	8%	$ 25,000.	_____
5)	Lenore	8%	$ 32,900.	_____
6)	Manuel	7%	$ 43,800	_____
7)	Santina	7%	$ 72,000.	_____
8)	Sue	7%	$ 48,300.	_____
9)	Chuck	7%	$ 57,370.	_____
10)	Pat	7%	$102,500.	_____

FOLLOW - UP ACTIVITIES:

* Visit a real estate office and ask about rate of commission as well as job necessities (car, license to sell real estate etc.)
* List other jobs that you think might pay commission rather than an hourly rate.
* Assuming that the 10 sales people listed on the chart worked 50 hours per week, determine their hourly wage based on commission.

1) $5,399.20
2) 7,864.00
3) 4,320.00
4) 2,000.00
5) 2,632.00
6) 3,066.00
7) 5,040.00
8) 3,381.00
9) 4,015.90
10) 7,175.00

DISCOUNTS GALORE

DIRECTIONS: *As the assistant manager, you complete the discount sheet below.*

	ITEM	REGULAR PRICE	PERCENTAGE DISCOUNT	DISCOUNT $ AMOUNT	SALE PRICE
1)	sweat shirt	$ 10.00	10%	$ 1.00	$_____
2)	jacket	24.99	15%	_____	21.24
3)	10 speed bike	299.00	12%	35.88	_____
4)	color T.V.	_____	15%	70.49	399.44
5)	tennis racket	15.99	33 1/3%	_____	_____
6)	bike speedometer	8.49	45%	_____	_____
7)	western style boots	42.97	_____	12.89	_____
8)	watch	32.50	_____	[illegible].50	_____
9)	socks	_____	10%	.10	_____
10)	robe	_____	_____	4.50	25.50
11)	transistor radio	39.50	35%	_____	_____
12)	stereo	_____	20%	50.00	_____
13)	tennis shoes	_____	25%	7.00	_____
14)	am-fm radio	43.99	25%	_____	_____
15)	album set	_____	10%	2.00	_____

FOLLOW - UP ACTIVITIES:

* Go through a catalogue and cut out pictures of items and their descriptions, including cost. Make a sale poster with the pictures and advertise a 15% discount. Include the amount saved as well as the sale price.

* Interview a store manager. Some questions to be asked could concern percent make-up per item and why there are seasonal sales. (Why are sheets on sale in January?).

1) $ 9.00
2) 3.75
3) 263.12
4) 469.93
5) 5.33/ 10.66
6) 3.82/ 4.67
7) 30%/ 30.08
8) 20%/ 26.00
9) 1.00/ .90
10) 30.00/ 15%
11) 13.83/ 25.67
12) 250.00/200.00
13) 28.00/ 21.00
14) 11.00/ 32.99
15) 20.00/ 18.00

CAREERS
Bookkeeper
Accountant
Secretary

PERCENT 4

THE HIGH COST OF LIVING

DIRECTIONS: *As head accountant, you must compute the cost of living raise for all the employees of a publishing company. Last year's salaries are recorded on the chart below. Figure the raise for each employee. The cost of living is 5.5%. (Salary x 5.5% = Raise) (5.5% = .055)*

	NAME	SALARY	RAISE
1)	Amanda Blake	$10,198.	
2)	Leslie Smith	$ 6,375.	
3)	John Murti	$11,700.	
4)	Lisa Weston	$14,680.	
5)	Maria Garcia	$ 9,680.	
6)	Janet Wing	$12,200.	
7)	Tim Lewis	$ 7,800.	
8)	John Leroy	$ 9,100.	
9)	Bettye Wilson	$ 2,100.	
10)	Sherie Johnson	$ 4,680.	
11)	Jean Jones	$14,875.	
12)	Tom Queen	$13,690.	
13)	Jeff White	$ 8,100.	
14)	Jerry Cook	$14,750.	

FOLLOW - UP ACTIVITIES:

* Figure the salary for the next year.

* Find out the percent that the cost of living has increased for the past three months.

1) $560.89
2) 350.63
3) 643.50
4) 807.40
5) 532.40
6) 671.00
7) 429.00
8) 500.50
9) 115.50
10) 257.40
11) 818.13
12) 752.95
13) 445.50
14) 811.25

THE OVER $400 CLUB

DIRECTIONS: You work on commission for a hardware store. You make a base salary of $110.00 per week plus 7% commission of total sales over $400.00. Below is a chart showing yours sales for August, September and October. Compute the amount of commission that you made each week. REMEMBER THAT COMMISSION IS NOT PAID ON THE TOTAL SALE, BUT ON THE AMOUNT THAT EXCEEDS $400.00

	DATE		TOTAL SALES	AMOUNT OVER $400.00	COMMISSION
1)	August	7	$586.00		
2)	August	14	346.00		
3)	August	21	492.00		
4)	August	28	687.00		
5)	September	4	396.00		
6)	September	11	412.00		
7)	September	18	736.00		
8)	September	25	486.00		
9)	October	2	511.00		
10)	October	9	404.00		
11)	October	16	986.00		
12)	October	23	473.00		

FOLLOW - UP ACTIVITIES:

* Interview a person who works on commission.
* Make a list of people who work on commission.
* Find out what the percent of commission is for an insurance sales person, a real estate sales person, a automobile dealer, a sales clerk etc.

1) $13.02
2) .00
3) 6.44
4) 20.09
5) .00
6) .84
7) 23.52
8) 6.02
9) 7.77
10) .28
11) 41.02
12) 5.11

STOCK INVENTORY

DIRECTIONS: *You own a service station in your home town and it is the time of year for you to inventory your stock room for reordering. Complete your stock inventory below.*

1. If 75% of the 40 fan belts were sold, how many are in the stock room? _____

2. You had a good tire sale and were able to sell 80% of the 150 in the sale. How many are left? _____

3. 1,300 windshield blades were in stock. If you sold 2% of them, how many were sold? _____

4. There is only 9.5% of the 400 air filters remaining in the stock room. How many are there? _____

5. Because of the severe winter, you replaced many car batteries. Your inventory shows that 11% of the 200 remain. How many batteries are in storage? _____

6. Many customers ask for a map of Illinois when they stop to refuel. In the map bin there are only 6% of the 100 maps remaining. How many are there? _____

7. If 90% of the 20 tail pipes were used on repair jobs, how many were used? _____

8. 200 oil filters were previously ordered, how many are in the store room if only 7% of them are there? _____

9. You had 800 quarts of oil. The store room has 4.25% quarts of oil in it. How many quarts are there? _____

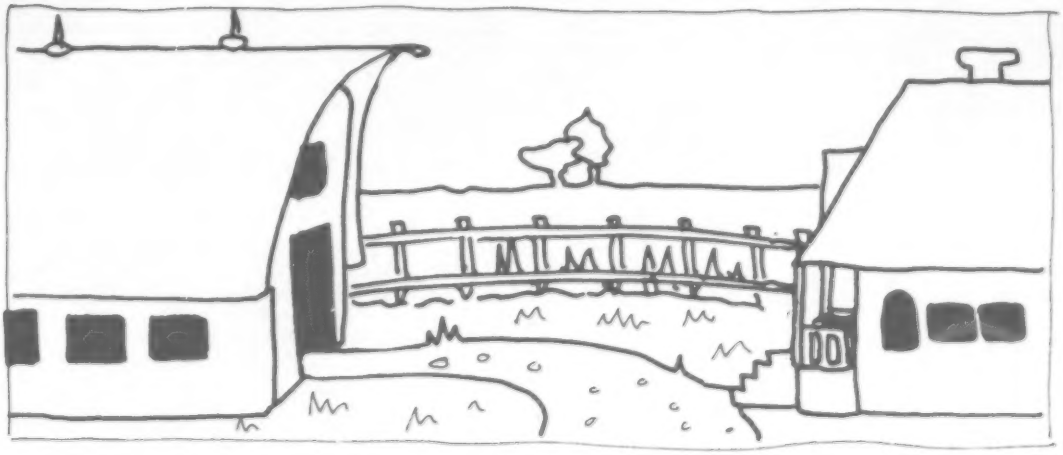
Stock
Inventory
page 6

1) 10
2) 30
3) 26
4) 38
5) 22
6) 6
7) 18
8) 14
9) 34

THE FARMER'S EXPENSES

DIRECTIONS: *Being a farmer is much more involved than most people think. Part of being a farmer is figuring out a monthy budget. If your income for the month was $7,400.00, find the following expenses and how much you would have left.*

1. Bills on your farm 18% _____
2. Repairs on machinery 4% _____
3. Feed for the livestock 12% _____
4. Seed for planting 20% _____
5. Some new cattle 32% _____
6. Miscellaneous expenses 7% _____
7. Total expenses _____
8. You will have left after your expenses for the month. _____



The Farmer's
Expenses
page 7

1) $1,332.00
2) 296.00
3) 888.00
4) 1,480.00
5) 2,368.00
6) 518.00
7) 6,882.00
8) 518.00

KEEP ON TRUCK'N !

DIRECTIONS: *You are a long distance driver traveling from New York with 50,000 kg of cargo. There are eight stops along the way. Compute the amount you will unload at each stop.*

HINT: Change percent to decimal.
EXAMPLE: 24% = .24; multiply 50,000 x .24

STOPS	% OF CARGO	WEIGHT IN KILOGRAMS
Philadelphia, Pa.	9%	
Pittsburgh, Pa.	12%	
Indianapolis, Ind.	2%	
St. Louis, Mo.	20%	
Kansas City, Mo.	28%	
Denver, Colo.	11%	
Phoenix, Ariz.	14%	
Los Angeles, Ca.	4%	

Keep on
Truck'n
page 8

1) 4,500 kg
2) 6,000
3) 1,000
4) 10,000
5) 14,000
6) 5,500
7) 7,000
8) 2,000

BALANCE OR BUST

DIRECTIONS: *You are having trouble balancing your checking account book with the statement. You took your check book and statement to the bank to determine the errors. The bookkeeping department looked it over and found 5 errors. Find the errors yourself and correct them. Put "A" by the addition errors, "S" by the subtraction errors and "C" by the errors in copying.*

CHECK NUMBER	DATE WRITTEN	CHECK DESCRIPTION	AMOUNT OF CHECK		AMOUNT OF DEPOSIT		BALANCE	
							8	66
	1 - 14	Deposit			150	00	150	00
							158	66
101	1 - 14	Save Rite Oil Company	60	10			60	10
							98	54
102	1 - 14	Magazine Subscription	8	19			8	19
							90	37
103	1 - 14	Dr. Cahill	20	00			20	00
							60	37
104	1 - 14	Food Store	35	00			25	00
							35	37
	1 - 22	Deposit			50	00	50	00
							75	37
105	1-- 23	Insurance Company	30	00			80	00
							5	37

STATEMENT
ACCOUNT NO. 17858
STATEMENT DATE: 2-10-77
CHECKING INFORMATION

NUMBER OF ENCLOSURES:	5
BALANCE FORWARD:	$ 8.66
DEPOSIT TOTAL:	$200.00
CHECK TOTAL:	$203.29
ENDING BALANCE:	$ 5.37

CHECK #	DATE PAID	AMOUNT
101	1-12	$ 60.10
105	1-15	$ 80.00
103	1-20	$ 20.00
104	1-25	$ 35.00
102	2-03	$ 8.19
DEPOSITS		
	1-16	$150.00
	1-22	$ 50.00

Balance or Bust
page 1

	$ 8.66
	150.00
	158.66
	60.10
(S)	98.56
	8.19
	90.37
	20.00
(S)	70.37
(C)	35.00
	35.37
(A)	50.00
	85.37
(C)	80.00
	5.37

LOSS OR GAIN ?

DIRECTIONS: *You are a stock broker and it is your responsibility to follow certain stocks to see if there is a gain (+) or a loss (-) in the price of the share each day. Below is your record sheet on A.T.R. and B. & B. companies. Determine the daily gain or loss of each company.*

	A.T.R.		B.& B.	
DATE	PRICE PER SHARE	G/L	PRICE PER SHARE	G/L
May 3	1.57	+.03	1.87	+.05
May 4	1.23	-.34	1.89	+.02
May 5	1.30	+.07	1.93	+.04
May 6	1.35		1.92	
May 7	1.45		1.95	
May 8	1.42		1.99	
May 9	1.47		2.01	
May 10	1.49		2.03	
May 11	1.53		1.99	
May 12	1.51		2.03	
May 13	1.50		2.05	
May 14	1.53		2.06	
May 15	1.55		2.04	
May 16	1.47		2.03	
May 17	1.57		2.02	
May 18	1.56		2.07	
May 19	1.53		2.08	
May 20	1.58		2.11	
May 21	1.59		2.14	
May 22	1.58		2.15	
May 23	1.60		2.19	
May 24	1.62		2.21	

Loss or Gain?
page 2

May 3	+.03	+.05	May 14	+.03	+.01
May 4	-.34	+.02	May 15	+.02	-.02
May 5	+.07	+.04	May 16	-.08	-.01
May 6	+.05	-.01	May 17	+.10	-.01
May 7	+.10	+.03	May 18	-.01	+.05
May 8	-.03	+.04	May 19	-.03	+.01
May 9	+.05	+.02	May 20	+.05	+.03
May 10	+.02	+.02	May 21	+.01	+.03
May 11	+.04	-.04	May 22	-.01	+.01
May 12	-.02	+.04	May 23	+.02	+.04
May 13	-.01	+.02	May 24	+.02	+.02

CAREERS
Sports Caster
Statistician

BREAKING A RECORD

DIRECTIONS: *You are a football player on your Junior High School football team. You need to have gained 93 yards in todays' football game to set a new school record. Here is a record of your attempts and yards gained or lost. Determine whether or not you set a new school record. (HINT: Add the yards gained, subtract the yards lost.)*

ATTEMPTS	YARDS GAINED	YARDS LOST	FIGURE HERE
1	7		7
2	3		10
3		2	8
4	11		
5	4		
6	13		
7		5	
8	9		
9	1		
10		4	
11		3	
12	21		
13	2		
14	6		
15		3	
16	17		
17	5		
18	1		
19		9	
20	14		
21	8		

TOTAL YARDAGE

Did you make a new school record? _____

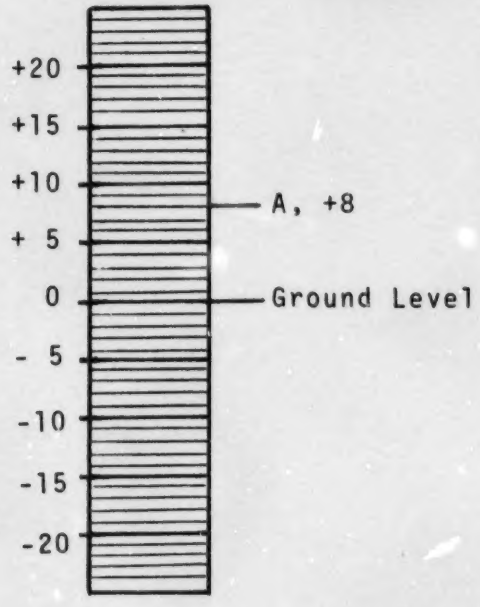
1) 7
2) 10
3) 8
4) 19
5) 23
6) 36
7) 31
8) 40
9) 41
10) 37
11) 34
12) 55
13) 57
14) 63
15) 60
16) 77
17) 82
18) 83
19) 74
20) 88
21) 96

BEING A SURVEYOR

DIRECTIONS: *You are surveying a piece of land that is going to be used for a new shopping mall. If the ground level is 400 meters above sea level, determine the number of meters above or below ground level. Then place them on the chart represented as an integer.*

Number one is an example for you.

1. Point A is 408 meters above sea level. — 8 meters above ground level
2. Point B is 386 meters above sea level. _____
3. Point C is 391 meters above sea level. _____
4. Point D is 418 meters above sea level. _____
5. Point E is 400 meters above sea level. _____
6. Point F is 409 meters above sea level. _____
7. Point G is 379 meters above sea level. _____
8. Point H is 401 meters above sea level. _____



A) 8 meters above
B)14 meters below
C) 9 meters below
D)18 meters above
E) ground level
F) 9 meters above
G)21 meters below
H) 1 meter above

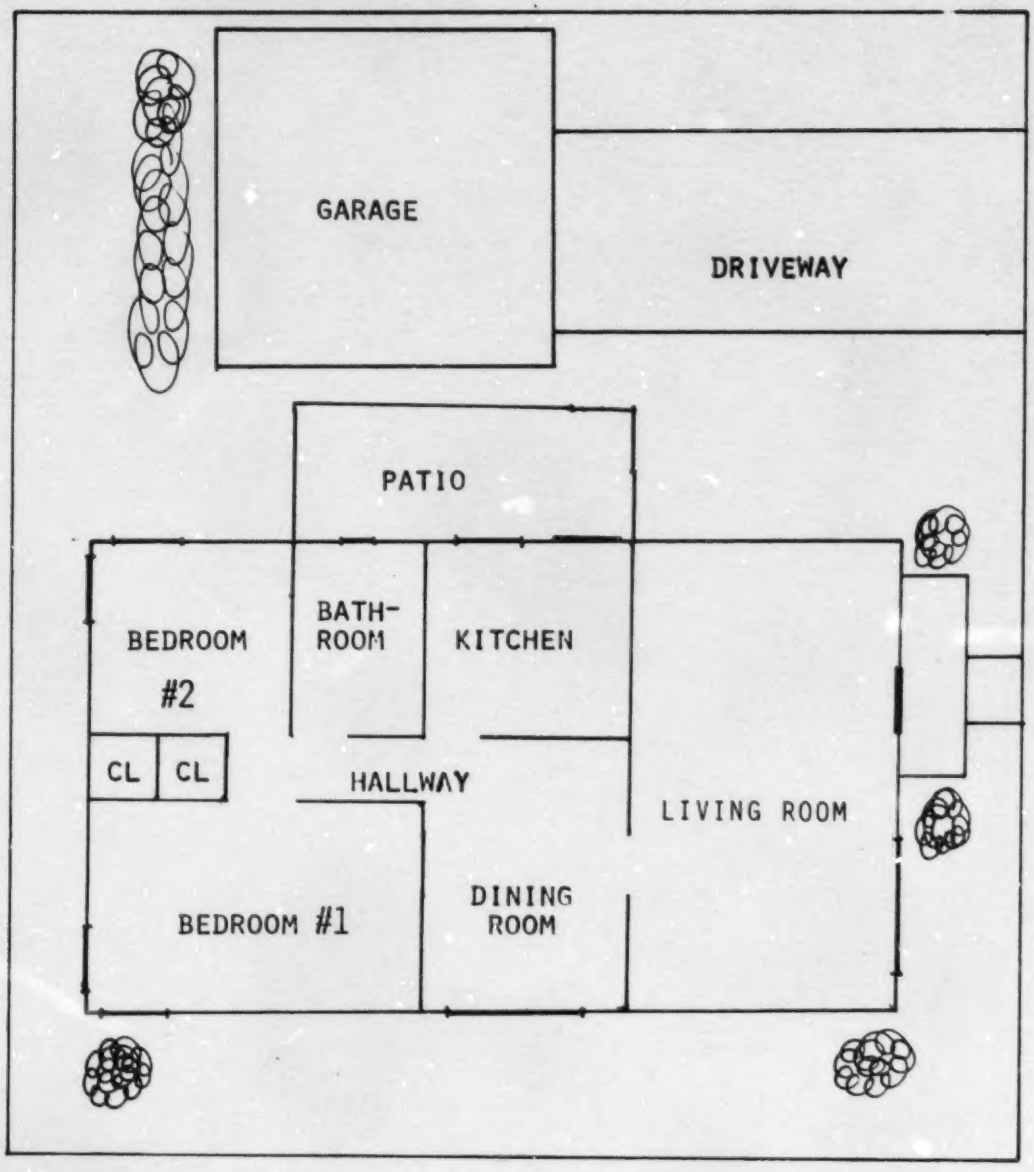
WHAT'S THE DIFFERENCE ?

DIRECTIONS: *The following are the daily noon temperature readings taken on the dates indicated. As a meteorologist, one of your duties is to report the difference between the temperature on a particular date and the temperature on the same date one year previous. Looking over the sample temperatures, determine what the difference in degrees were by subtracting 1970 from 1971.*

	DATE	1970	1971	+/- DIFFERENCE
1.	Jan. 1	0°C	- 3°C	-3°C
2.	Jan. 15	-10°C	-15°C	-5°C
3.	Feb. 1	- 4°C	2°C	
4.	Feb. 15	7°C	6°C	
5.	March 1	10°C	5°C	
6.	March 15	5°C	- 5°C	
7.	April 1	15°C	10°C	
8.	April 15	17°C	12°C	
9.	May 1	12°C	18°C	
10.	May 15	20°C	24°C	
11.	June 1	15°C	22°C	
12.	June 15	20°C	30°C	
13.	July 1	25°C	26°C	
14.	July 15	39°C	37°C	
15.	Aug. 1	37°C	30°C	
16.	Aug. 15	36°C	29°C	
17.	Sept. 1	26°C	20°C	
18.	Sept. 15	24°C	17°C	
19.	Oct. 1	15°C	12°C	
20.	Oct. 15	17°C	17°C	
21.	Nov. 1	5°C	3°C	
22.	Nov. 15	2°C	- 2°C	
23.	Dec. 1	-13°C	-11°C	
24.	Dec. 15	-12°C	-10°C	

1) -3 °C
2) -5 °C - examples
3) +6
4) -1
5) -5
6) -10
7) -5
8) -5
9) +6
10) +4
11) +7
12) +10
13) +1
14) -2
15) -7
16) -7
17) -6
18) -7
19) -3
20) 0
21) -2
22) -4
23) +2
24) +2

YOU COULD BE
ANOTHER FRANK LLOYD WRIGHT

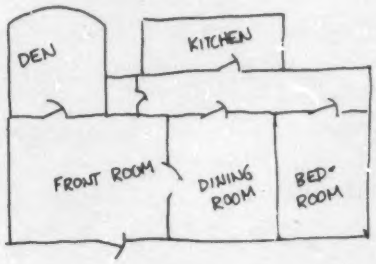


SCALE: 1 centimeter (cm.) = 1 meter (m.)

You Could Be Another
Frank Lloyd Wright
page 2

lot size	17	15	255	64	1) 12 sq. m.
garage	5	5	25	20	2) 47 m.
diveway	7	3	21	20	3) 64 sq. m.
house	12	7	84	38	4) 10 tiles
living room	7	4	28	22	5) $119.00
dining room	4	3	12	14	6) 15 sq. m.
kitchen	3	3	9	12	
bedroom #1	5	3	15	16	
bedroom #2	3	3	9	12	
hallway	3	1	3	8	
bathroom	3	2	6	10	

YOU COULD BE . . . CONTINUED



DIRECTIONS: Study the basic floor plan on the preceeding page and measure each area that is listed below. USE YOUR METRIC RULERS and use centimeter or square centimeter and meter or square meter as needed in your answers.

ROOM OR AREA	LENGTH	WIDTH	AREA	PERIMETER
lot size				
garage				
driveway				
house				
living room				
dining room				
kitchen				
bedroom #1				
bedroom #2				
hallway				
bathroom				

ANSWER THE FOLLOWING:

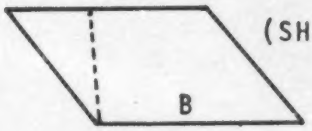
1. How much tar is needed to cover the driveway? _____ sq. m.
2. If the owner wanted to put in a fence on the back and sides of the property, how much fencing should be bought? _____ m.
3. If the owner wanted to carpet the living room, dining room, and the two bedrooms, how much carpeting should be purchased? _____sq. m.
4. How many cement tiles will be needed to cover the patio, if each tile is 1 sq. m.? _____
5. Since a new sidewalk is being put in, each home owner will be taxed $7.00 per meter of property facing the street. What will this owner's TAX BILL be? _____
6. The family wants to put in a garden behind the garage to their property line. How much room is there? _____

CAREERS
Carpenter Draftsperson
Brick Layer Engineer
Carpet Layer Architect
Landscapers

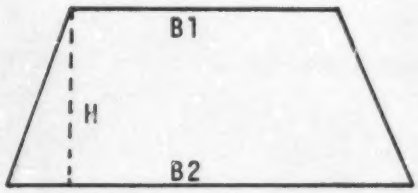
MEASUREMENT ACTIVITIES

DIRECTIONS: *Fill in the missing information. Scale: 1cm - 1 m. Use your metric ruler.*

1) EXAMPLE



(SH) - slant height



NAME: _____

PERIMETER: _____

AREA: _____

NAME: _____

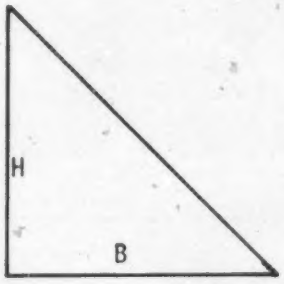
PERIMETER: _____

AREA: _____

NAME: _____

PERIMETER: _____

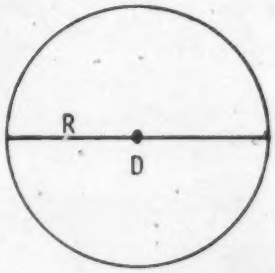
AREA: _____



NAME: _____

PERIMETER: _____

AREA: _____



NAME: _____

PERIMETER: _____

AREA: _____

1) Choose a room of the school, or a house and find its dimensions. Make a scale drawing of the room, and determine the cost of carpeting the area at $9.00 a square meter.

2) Choose another type of object (such as a desk) measure the dimensions and make scale drawings showing front, top and side views.

FOLLOW - UP ACTIVITIES:

* Have a bridge building contest. (toothpicks and straws work well) Have students build bridges according to specific rules and measurements.

* Have students view blueprints.

ESTIMATING ROOFS

DIRECTIONS: You are a roofer. Besides nailing shingles on roofs, you also have to estimate how many shingles you will need for each house.

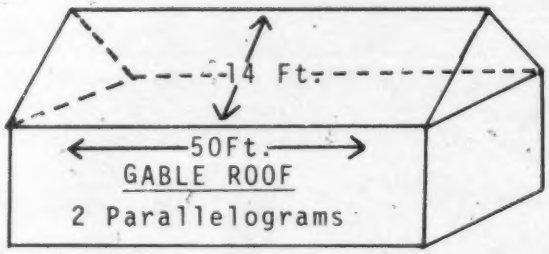
The two most common styles of roofs are the hip and the gable. A hip roof is 4 triangular sides that meet at one point. A gable roof is 2 parallelograms that meet in the middle of the roof to form a line segment.

Shingles are sold by the "square." One square of shingles is enough shingles to cover 100 square feet of roof. Therefore, you must estimate roofs in square feet. How would you estimate a gable roof? How do you determine the area of a parallelogram?

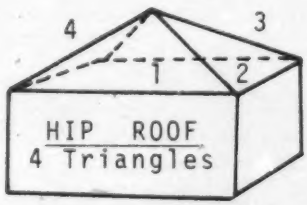
How would you estimate a hip roof? How do you determine the area of a triangle?

Examine the examples and estimate the following roofs.

EXAMPLE:



Both sides of this roof measured the same. To find the area of one side (a parallelogram) multiply 50' by 14'. Then double it because the other side of the roof is also 50' by 14' (14'x50') x 2 = 1400 sq. ft. Shingles are sold by the 100 square feet, however, so divide your answer by 100. 1400÷ 100 = 14. You will need 14 squares of shingles to roof this house.



You must determine the base and altitude for each of the four triangles of this roof. Their measures are: side 1 height: 25' base 30', side 2 height 25' base 25', side 3 height 25' base 30', side 4 height 25' base 25'

Now find the area of each of the garage's sides. Use the formula used to find the area of a triangle (½ base times altitude or height).

Side 1 ½(25'x30') = 375 sq. ft.
Side 2 ½(25'x25') = 312.5 sq. ft.
Side 3 ½(25'x30') = 375 sq. ft.
Side 4 ½(25'x25') = 312.5 sq. ft.

The total number of sq. ft. is 1375. Shingles are sold by the 100 sq. ft. you would need 13.75 squares.

Estimating Roofs
page 4 and 5

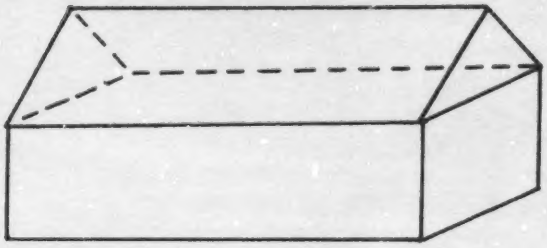
Gable Roof
1) 1,350 sq. ft.
2) 13.5 (14)

1) 1,800 sq. ft.
2) 18

Hip Roof
1) 1,479 sq. ft.
2) 14.79 (15)

1) 800 sq. ft.
2) 8

ESTIMATING ROOFS



GABLE ROOFS

Side 1: height 25'
base 27'

Side 2: height 25'
base 27'

Total area _____

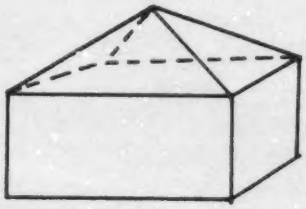
Total squares needed _____

Side 1: height 30'
base 30'

Side 2: height 30'
base 30'

Total area _____

Total squares needed _____



HIP ROOFS

Side 1: h 27' b 27'

Side 2: h 30' b 25'

Side 3: h 27' b 27'

Side 4: h 30' b 25'

Total area _____

Total squares needed _____

Side 1: h 20' b 20'

Side 2: h 20' b 20'

Side 3: h 20' b 20'

Side 4: h 20' b 20'

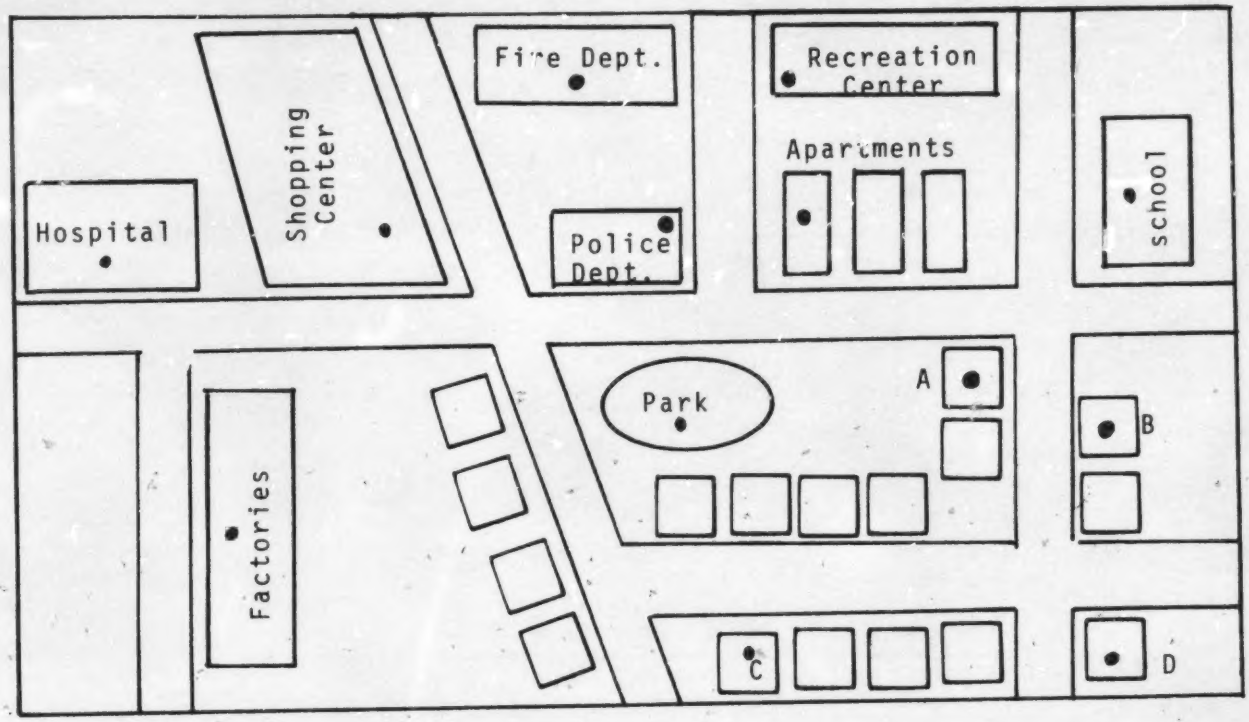
Total ares _____

Total squares needed _____

PLAN A CITY

SCALE EQUALS
1 cm equals .5 km

DIRECTIONS: *This is a scale drawing of an urban planner's "ideal community". Use your metric ruler to answer the following questions. Measure each place from dot to the designated dot.*



1. How far is it from house D to School? _____
2. How far is it from the Factories to the Hospital? _____
3. How far is it from house A to the Shopping Center? _____
4. How far is it from the Fire Department to house C? _____
5. How far is it from the School to the Park? _____
6. How far is it from the Police Department to the Recreation Center? _____
7. How far is it from house B to the Factory? _____
8. If you lived in house D, picked up your friend in house C and then went to the Park, how far did you walk? _____
9. If you were at the Hospital visiting a friend, then went to the Shopping Center, how far did you go? _____
10. If you lived in the Apartment Building and rode your bike to the Recreation Center and home again, how far did you ride? _____

1) 3.5 km
2) 2.25 km
3) 4.5 km
4) 4.5 km
5) 3.75 km
6) 1.5 km
7) 6.5 km
8) 4.5 km
9) 2 km
10) 2 km

MAKE IT FIT

As a book illustrator, your job is to draw items needed to explain or attract attention. You are working on a job right now that involves drawing items found around school. The problem is that you need to draw these items in proportion to their actual sizes. (You don't want paper clips to look bigger than books.)

Determine a suitable scale and use it to draw any 5 items you would find in a classroom. Use the same scale for each item.

EXAMPLE: A pencil's actual measurement is 15cm. Your scale is $\frac{1\text{ cm}}{5\text{ cm}}$. The top number is the drawing on the paper, the bottom number is the actual item. So your drawing of the pencil would be 3cm long.